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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of

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Applicant(s) : Affinito et al.
Serial No. : 09/811,919
Filed : March 19, 2001
Title : **PLASMA ENHANCED CHEMICAL DEPOSITION FOR HIGH AND/OR
LOW INDEX OF REFRACTION POLYMERS**
Docket : BAT 0029 IA

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on June 13, 2001.

Patricia L. Prior

Patricia L. Prior

Reg. No. 33,758

Assistant Commissioner for Patents
Washington, DC 20231

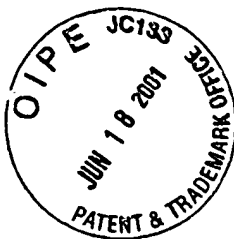
Sir:

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§ 1.56, 1.97, AND 1.98

Applicants submit herewith patents, publications, and other information of which they are aware, which they believe may be material, as defined in 37 CFR §1.56(b), to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR §1.56(a). While the information referred to in this Information Disclosure Statement may be material pursuant to 37 CFR §1.56(b), the filing of this Information Disclosure Statement is not intended to, pursuant to 37 CFR §1.97(h), constitute an admission that any patent, publication, or other information referred to is, or is considered to be, material to the patentability of this invention. Further, pursuant to 37 CFR §1.97(g), the filing of this Statement should not be construed as a statement that a search has been made or that no other material information exists.

A listing of all items of information cited is attached on PTO/SB/08A, a substitute for form 1449A/PTO. Copies of the items are enclosed for the convenience of the Examiner.

Serial No. 09/811,919
Docket BAT 0029 IA



This Information Disclosure Statement is being filed within the period set forth in 37 CFR §1.97(b) because it is filed within three months of the filing date of a national application or within three months of the date of entry of the national stage as set forth in 37 CFR §1.491 in an international application.

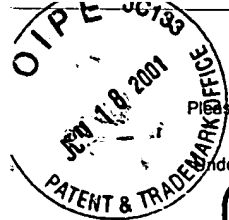
Respectfully submitted,

KILLWORTH, GOTTMAN, HAGAN
& SCHAEFF, L.L.P.

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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
Sheet	1	of	6	Application Number	09/811,919
				Filing Date	March 19, 2001
				First Named Inventor	John D. Affinito
				Group Art Unit	
				Examiner Name	
				Attorney Docket Number	BAT 0029 IA

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
		3,475,307		Knox et al.	10/28/1969	
		3,607,365		Lindlof	09/21/1971	
		4,098,965		Kinsman	07/04/1978	
		4,283,482		Hattori et al.	08/11/1981	
		4,581,337		Frey et al.	04/08/1986	
		4,624,867		Iijima et al.	11/25/1986	
		4,695,618		Mowrer	09/22/1987	
		4,842,893		Yializis et al.	06/27/1989	
		4,954,371		Yializis	09/04/1990	
		5,032,461		Shaw et al.	07/16/1991	
		5,237,439		Misono et al.	08/17/1993	
		5,260,095		Affinito	11/09/1993	
		5,354,497		Fukuchi et al.	10/11/1994	
		5,395,644		Affinito	03/07/1995	
		5,427,638		Goetz et al.	06/27/1995	
		5,440,446		Shaw et al.	08/08/1995	
		5,536,323		Kirlin et al.	07/16/1996	
		5,547,508		Affinito	08/20/1996	
		5,554,220		Forrest et al.	09/10/1996	

FOREIGN PATENT DOCUMENTS								
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		Office ³	Number ⁴	Kind Code ⁵ (if known)				
			EP 0 299 753		The BOC Group, Inc.	01/18/1989		
			EP 0 340 935		Spectrum Control, Inc.	11/08/1989		
			EP 0 390 540		Sharp Kabushiki Kaisha	10/03/1990		
			EP 0 547 550		Matsushita Electric Ind Co.	06/23/1993		
			EP 0 590 467		Rohm GMBH	04/06/1994		
			EP 0 722 787		Catalina Coatings, Inc.	07/24/1996		
			EP 0 787 826		Becton Dickinson and Co.	08/06/1997		
			EP 0 916 394		Sharp Kabushiki Kaisha	05/19/1999		
			EP 0 931 850		Leybold Systems GmbH	07/28/1999		
			EP 0 977 469		Hewlett-Packard Company	02/02/2000		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 6

Complete if Known

Application Number	09/811,919
Filing Date	March 19, 2001
First Named Inventor	John D. Affinito
Group Art Unit	
Examiner Name	
Attorney Docket Number	BAT 0029 IA

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		5,576,101		Saitoh et al.	11/19/1996	
		5,607,789		Treger et al.	03/04/1997	
		5,620,524		Fan et al.	04/15/1997	
		5,629,389		Roitman et al.	05/13/1997	
		5,654,084		Egert	08/05/1997	
		5,665,280		Tropsha	09/09/1997	
		5,681,615		Affinito et al.	10/28/1997	
		5,681,666		Treger et al.	10/28/1997	
		5,684,084		Lewin et al.	11/04/1997	
		5,686,360		Harvey, III et al.	11/11/1997	
		5,693,956		Shi et al.	12/02/1997	
		5,711,816		Kirlin et al.	01/27/1998	
		5,725,909		Shaw et al.	03/10/1998	
		5,731,661		So et al.	03/24/1998	
		5,747,182		Friend et al.	05/05/1998	
		5,757,126		Harvey, III et al.	05/26/1998	
		5,759,329		Krause et al.	06/02/1998	
		5,792,550		Phillips et al.	08/11/1998	
		5,811,177		Shi et al.	09/22/1998	

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		Office ³	Number ⁴	Kind Code ⁵ (if known)				
			WO 87 07848		Spectrum Control, Inc.	12/30/1987		
			WO 95 10117		Catalina Coatings, Inc.	04/13/1995		
			WO 97 04885		Battelle Memorial Institute	02/13/1997		
			WO 97 22631		Talison Research	06/26/1997		
			WO 98 10116		Talison Research	03/12/1998		
			WO 98 18852		Catalina Coatings, Inc.	05/07/0998		
			WO 99 16557		Battelle Memorial Institute	04/08/1999		
			WO 99 16931		Battelle Memorial Institute	04/08/1999		
			DE 19603746		Bosch GmbH Robert	04/24/1997		
			JP 09059763		Matsushita Electric Works	03/04/1997		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	09/811,919
				Filing Date	March 19, 2001
				First Named Inventor	John D. Affinito
				Group Art Unit	
				Examiner Name	
Sheet	3	of	6	Attorney Docket Number	BAT 0029 IA

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		Number	Kind Code ² (if known)			
		5,811,183		Shaw et al.	09/22/1998	
		5,821,692		Rogers et al.	10/13/1998	
		5,844,363		Gu et al.	12/01/1998	
		5,872,355		Hueschen	02/16/1999	
		5,902,641		Affinito et al.	05/11/1999	
		5,902,688		Antoniadis et al.	05/11/1999	
		5,904,958		Dick et al.	05/18/1999	
		5,912,069		Yializis et al.	06/15/1999	
		5,919,328		Tropsha et al.	07/06/1999	
		5,922,161		Wu et al.	07/13/1999	
		5,945,174		Shaw et al.	08/31/1999	
		5,948,552		Antoniadis et al.	09/07/1999	
		5,955,161		Tropsha	09/21/1999	
		5,965,907		Huang et al.	10/12/1999	
		5,968,620		Harvey et al.	10/19/1999	
		5,996,498		Lewis	12/07/1999	
		6,013,337		Knors	01/11/2000	
		6,045,864		Lyons et al.	04/04/2000	
		6,083,628		Yializis	07/04/2000	

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		Office ³	Number ⁴	Kind Code ⁵ (if known)				
			JP 08325713		Matsushita Electric Works	12/10/1996		
			JP 63136316		Hitachi Ltd.	06/08/1988		
			JP 64-18441		Yoshida et al.	01/23/1989		
			JP 2-183230		Akagi et al.	07/17/1990		
			BE 704 297		Continental Oil Company	02/01/1968		

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Sheet

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Application Number

09/811,919

Filing Date

March 19, 2001

First Named Inventor

John D. Affinito

Group Art Unit

Examiner Name

Attorney Docket Number

BAT 0029 IA

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 5 of 6

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Application Number	09/811,919
Filing Date	March 19, 2001
First Named Inventor	John D. Affinito
Group Art Unit	
Examiner Name	
Attorney Docket Number	BAT 0029 IA

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		AFFINITO, J.D., ET AL., "Vacuum Deposition of Polymer Electrolytes on Flexible Substrates," "Proceedings of the Ninth International Conference on Vacuum Web Coating," November 1995 ed R. Bakish, Bakish Press 1995, pg. 20-36	
		VOSSSEN, J.L., ET AL., THIN FILM PROCESSES, Academic Press, 1978, Part II, Chapter 11-1, Glow Discharge Sputter Deposition, p. 12-63; Part IV, Chapter IV-1, Plasma Deposition of Inorganic Compounds and Chapter IV-2 Glow Discharge Polymerization, p. 335-397	
		PENNING, F.M., ELECTRICAL DISCHARGES IN GASSES, Gordon and Breach Science Publishers, 1965, Chapters 5-6, p. 19-35, and Chapter 8, p. 41-50	
		AFFINITO, J.D., ET AL., "High Rate Vacuum Deposition of Polymer Electrolytes," Journal Vacuum Science Technology A 14(3), May/June 1996	
		INOUE ET AL., FABRICATION OF A THIN FILM OF MNA BY VAPOUR DEPOSITION, Proc. Jpn. Congr. Mater. Res., vol. 33, pg. 177-9, 1990	
		AFFINITO, J.D. ET AL., "PML/Oxide/PML Barrier Layer Performance Differences Arising From Use of UV or Electron Beam Polymerization of the PML Layers," Thin Solid Films, Elsevier Science S.A., Vol. 308-309, October 31, 1997, pgs. 19-25	
		GUSTAFSSON, G. ET AL., "Flexible light-emitting diodes made from soluble conducting polymers," Nature, Vol. 357, 11 June 1992, pgs. 447-479	
		AFFINITO, J.D. ET AL., "Polymer-Oxide Transparent Barrier Layers," SVC 39th Annual Technical Conference, Vacuum Web Coating Session, 1996, pgs. 392-397	
		AFFINITO, J.D. ET AL., "PML/Oxide/PML Barrier Layer Performance Differences Arising From Use of UV or Electron Beam Polymerization of the PML Layers," SVC 40th Annual Technical Conference, 1997, pgs. 19-25	
		WONG, C.P., "Recent Advances in IC Passivation and Encapsulation: Process Techniques and Materials," Polymers for Electronic and Photonic Applications, AT&T Bell Laboratories, 1993, pgs. 167-209	
		DE GRYSSE, R. ET AL., "SPUTTERED TRANSPARENT BARRIER LAYERS, pgs. 190-198	

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Sheet

6

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		TROPSHA ET AL., "Activated Rate Theory Treatment of Oxygen and Water Transport through Silicon Oxide/Poly(ethylene terephthalate) Composite Barrier Structures," J. Phys. Chem B 1997, pgs. 2259-2266	
		TROPSHA ET AL., "Combinatorial Barrier Effect of the Multilayer SiO ₂ Coatings on Polymer Substrates," 1997 Society of Vacuum Coaters, 40th Annual Technical Conference Proceedings	
		PHILLIPS ET AL., "Evaporated Dielectric Colorless Films on PET and OPP Exhibiting High Barriers Toward Moisture and Oxygen," Society of Vacuum Coaters, 36th Annual Technical Conference Proceedings (1993), pgs. 293-300	
		CHAHROUDI, "Transparent Glass Barrier Coatings for Flexible Film Packaging," Society of Vacuum Coaters, 34th Annual Technical Conference Proceedings (1991), pgs. 130-133	
		YAMADA ET AL., "The Properties of a New Transparent and Colorless Barrier Film," Society of Vacuum Coaters, 38th Annual Technical Conference Proceedings (1995), pgs. 28-31	

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